

# **PICEANCE VLY NAD 83**

**RU 07-07S-093W**

**RU 22-7 Pad**

**RU 311-7 - Slot B7**

**Wellbore #1**

**Plan: Design #1 28Mar16 sam**

## **Standard Planning Report**

**13 April, 2016**

# WPX

## Planning Report

<b>Database:</b>	COMPASS	<b>Local Co-ordinate Reference:</b>	Well RU 311-7 (B7) - Slot B7
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KB @ 7363.00usft (HP 318)
<b>Project:</b>	RU 07-07S-093W	<b>MD Reference:</b>	KB @ 7363.00usft (HP 318)
<b>Site:</b>	RU 22-7 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RU 311-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 28Mar16 sam		

<b>Project</b>	RU 07-07S-093W, Garfield County, CO		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Central Zone		Using geodetic scale factor

Site		RU 22-7 Pad			
Site Position:		Northing:	1,599,673.60 usft	Latitude:	39.456918
From:	Map	Easting:	2,345,086.00 usft	Longitude:	-107.819705
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	-1.46 °

Well	RU 311-7 - Slot B7					
Well Position	+N/-S	38.79 usft	Northing:	1,599,712.33 usft	Latitude:	39.457025
	+E/-W	1.77 usft	Easting:	2,345,088.76 usft	Longitude:	-107.819698
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	7,339.00 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	3/28/2016	9.74	65.61	51,655

<b>Design</b>	Design #1 28Mar16 sam			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (bearing)</b>
	0.00	0.00	0.00	324.64

<b>Plan Sections</b>										
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
145.00	0.00	0.00	145.00	0.00	0.00	0.00	0.00	0.00	0.00	
882.62	22.13	324.64	864.42	114.73	-81.42	3.00	3.00	0.00	324.64	
4,418.84	22.13	324.64	4,140.16	1,201.03	-852.32	0.00	0.00	0.00	0.00	
5,894.08	0.00	0.00	5,579.00	1,430.48	-1,015.16	1.50	-1.50	0.00	180.00	
5,994.08	0.00	0.00	5,679.00	1,430.48	-1,015.16	0.00	0.00	0.00	0.00	10 acre RU 311-7 MV
9,759.08	0.00	0.00	9,444.00	1,430.48	-1,015.16	0.00	0.00	0.00	0.00	

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<b>Project:</b>	RU 07-07S-093W	<b>MD Reference:</b>	KB @ 7363.00usft (HP 318)
<b>Site:</b>	RU 22-7 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RU 311-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 28Mar16 sam		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145.00	0.00	0.00	145.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 3.00</b>									
500.00	10.65	324.64	497.96	26.83	-19.04	32.90	3.00	3.00	0.00
882.62	22.13	324.64	864.42	114.73	-81.42	140.68	3.00	3.00	0.00
<b>Hold 22.13 Inclination</b>									
1,000.00	22.13	324.64	973.15	150.78	-107.01	184.89	0.00	0.00	0.00
1,124.00	22.13	324.64	1,088.02	188.88	-134.04	231.60	0.00	0.00	0.00
<b>9 5/8"</b>									
1,500.00	22.13	324.64	1,436.32	304.38	-216.01	373.24	0.00	0.00	0.00
2,000.00	22.13	324.64	1,899.49	457.98	-325.01	561.58	0.00	0.00	0.00
2,500.00	22.13	324.64	2,362.66	611.58	-434.01	749.93	0.00	0.00	0.00
3,000.00	22.13	324.64	2,825.83	765.17	-543.01	938.27	0.00	0.00	0.00
3,440.62	22.13	324.64	3,234.00	900.53	-639.07	1,104.25	0.00	0.00	0.00
<b>Top of "G" Sand</b>									
3,478.41	22.13	324.64	3,269.00	912.14	-647.31	1,118.48	0.00	0.00	0.00
<b>Base of "G" Sand</b>									
3,500.00	22.13	324.64	3,289.00	918.77	-652.01	1,126.61	0.00	0.00	0.00
4,000.00	22.13	324.64	3,752.17	1,072.37	-761.02	1,314.96	0.00	0.00	0.00
4,418.84	22.13	324.64	4,140.16	1,201.03	-852.32	1,472.73	0.00	0.00	0.00
<b>Start Drop -1.50</b>									
4,500.00	20.91	324.64	4,215.66	1,225.31	-869.55	1,502.50	1.50	-1.50	0.00
5,000.00	13.41	324.64	4,693.06	1,345.54	-954.87	1,649.93	1.50	-1.50	0.00
5,500.00	5.91	324.64	5,185.62	1,413.92	-1,003.40	1,733.78	1.50	-1.50	0.00
5,894.08	0.00	0.00	5,579.00	1,430.48	-1,015.16	1,754.09	1.50	-1.50	8.97
<b>Vertical</b>									
5,994.08	0.00	0.00	5,679.00	1,430.48	-1,015.16	1,754.09	0.00	0.00	0.00
<b>MVRD target - Mesaverde</b>									
6,000.00	0.00	0.00	5,684.92	1,430.48	-1,015.16	1,754.09	0.00	0.00	0.00
6,500.00	0.00	0.00	6,184.92	1,430.48	-1,015.16	1,754.09	0.00	0.00	0.00
7,000.00	0.00	0.00	6,684.92	1,430.48	-1,015.16	1,754.09	0.00	0.00	0.00
7,500.00	0.00	0.00	7,184.92	1,430.48	-1,015.16	1,754.09	0.00	0.00	0.00
7,544.08	0.00	0.00	7,229.00	1,430.48	-1,015.16	1,754.09	0.00	0.00	0.00
<b>Approx. Top Gas</b>									
8,000.00	0.00	0.00	7,684.92	1,430.48	-1,015.16	1,754.09	0.00	0.00	0.00
8,500.00	0.00	0.00	8,184.92	1,430.48	-1,015.16	1,754.09	0.00	0.00	0.00
8,742.08	0.00	0.00	8,427.00	1,430.48	-1,015.16	1,754.09	0.00	0.00	0.00
<b>Cameo Coals</b>									
9,000.00	0.00	0.00	8,684.92	1,430.48	-1,015.16	1,754.09	0.00	0.00	0.00
9,459.08	0.00	0.00	9,144.00	1,430.48	-1,015.16	1,754.09	0.00	0.00	0.00
<b>Coal D</b>									
9,500.00	0.00	0.00	9,184.92	1,430.48	-1,015.16	1,754.09	0.00	0.00	0.00
9,609.08	0.00	0.00	9,294.00	1,430.48	-1,015.16	1,754.09	0.00	0.00	0.00
<b>Rollins</b>									
9,759.08	0.00	0.00	9,444.00	1,430.48	-1,015.16	1,754.09	0.00	0.00	0.00
<b>9759.08 Measured depth - TD</b>									

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<b>Project:</b>	RU 07-07S-093W	<b>MD Reference:</b>	KB @ 7363.00usft (HP 318)
<b>Site:</b>	RU 22-7 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RU 311-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 28Mar16 sam		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(bearing)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
10 acre RU 311-7 MVRD	0.00	0.00	5,679.00	1,430.48	-1,015.16	1,601,168.20	2,344,110.50	39.460952	-107.823294
- plan hits target center									
- Circle (radius 50.00)									

Casing Points					
Measured Depth	Vertical Depth	Name		Casing Diameter	Hole Diameter
(usft)	(usft)			(in)	(in)
1,124.00	1,088.02	9 5/8"		9.625	13.500

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(bearing)	
3,440.62	3,234.00	Top of "G" Sand		0.00		
3,478.41	3,269.00	Base of "G" Sand		0.00		
5,994.08	5,679.00	Mesaverde		0.00		
7,544.08	7,229.00	Approx. Top Gas		0.00		
8,742.08	8,427.00	Cameo Coals		0.00		
9,459.08	9,144.00	Coal D		0.00		
9,609.08	9,294.00	Rollins		0.00		
9,759.08	9,444.00	TD		0.00		

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)		
145.00	145.00	0.00	0.00	Start Build 3.00	
882.62	864.42	114.73	-81.42	Hold 22.13 Inclination	
4,418.84	4,140.16	1,201.03	-852.32	Start Drop -1.50	
5,894.08	5,579.00	1,430.48	-1,015.16	Vertical	
5,994.08	5,679.00	1,430.48	-1,015.16	MVRD target	
9,759.08	9,444.00	1,430.48	-1,015.16	9759.08 Measured depth	